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COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL RESOURCES

ORIGINAL  
(Red)



SEMS DocID 2315078

# Preliminary Assessment

FOR

GULF OIL CO. R & D CENTER  
PA# 1982

Cheswick  
Allegheny County  
Pennsylvania

ORIGINAL  
(Red)

March 13, 1986

SUBJECT: Gulf Oil Company R & D Center  
Preliminary Assessment  
Allegheny County  
RCRA EPA I.D. No. PAD072159460

TO: Allegheny County File

FROM: Kathy Watson *KW*  
Solid Waste Specialist  
Bureau of Waste Management  
Pittsburgh Region

The above facility was added to the ERRIS list via a Potential Hazardous Waste Site Identification Form (EPA Form 2070-8) in October, 1985 and has not yet received a site number. It is located on Gulf Lab Road, Cheswick, PA 15024. The following information has been obtained regarding the site:

1. The site had been owned by Gulf Oil Corporation since approximately 1935. (The site was formerly a farm.)
2. Recently, Gulf Oil Corporation was purchased by Chevron. It was decided that the Gulf R & D facility would be donated to the University of Pittsburgh as a research facility. NUS Corporation was commissioned by Chevron to conduct a thorough soil and groundwater assessment prior to the deed transfer in March, 1986. Pennsylvania DER worked with Chevron and NUS during the assessment by reviewing data to determine if any remedial work needed to be done.
3. The assessment is entitled "Soil and Groundwater Assessment, Volumes 1, 2, and 3, prepared for Gulf Research and Development Company, Harmarville, Pa., NUS Project No. 7872, February 28, 1986". Copies are located at the Pittsburgh regional DER office, the University of Pittsburgh, and the Gulf R. & D. site.
4. Records and/or employee recollections of past waste disposal practices go back approximately 30 years.
5. In general, waste materials disposed on-site may have included laboratory chemicals, solvents, rubbish, incinerator ash (from incineration of rubbish), some gas cylinders, oily sludges, caustics, and acids.

6. From the files and employee recollections, several areas of concern were delineated for assessment (cross-hatched areas numbered 1 through 14 on attached site description map). In these areas it was alleged that wastes such as gas cylinders, powdered catalysts, lead containers, incinerator ash, lab chemicals, and oily sludges were disposed. Test pits and test borings were dug and monitoring wells were installed in these areas. The results from these areas narrowed further study to four areas of concern: Area No. 1 (named the Rosebowl area), Monitoring Well 3B Area (MW 3B), No. 9 Monitoring Well area, and Area 14 (considered a seepage basin).
7. The Rosebowl area was a lined basin used for treatment of acid and caustic oily sludges from 1960 to 1975. The sludges in the area were pumped out and the area was backfilled with clean fill. Groundwater analyses downgradient of the area indicate the presence of low levels of solvents, i.e., chlorobenzene, dichlorobenzene, and xylenes. Although no further remedial action was recommended by NUS or DER, DER is requesting continued quarterly monitoring downgradient of this area for a minimum of two years.
8. Analyses from the MW 3B area indicated the presence of small amounts of floating hydrocarbons. The hydrocarbons were determined to be No. 2 fuel oil with traces of dichlorobenzene, chlorobenzene, and benzene. Gulf could determine no record of past disposal or spills in this area, and no remedial actions were suggested by NUS or DER. The hydrocarbon contamination appeared to be localized. Again, DER is requesting continued quarterly monitoring in this area for a minimum of two years. (One undocumented suggestion made by Gulf as to source: racecar engines were tested in the general area. Perhaps a spill of fuel and/or engine cleaner occurred at some point.)
9. The No. 9 Monitoring Well area contained several storage tanks, most of which have been repaired, replaced, or removed. As the source of contamination was removed, no further remedial action was recommended by NUS or DER. (Throughout the site, a total of 45 tanks were tested. Fourteen had leaks in the piping/manhole systems. These were repaired. Six tanks were removed, three of which had leaks. No evidence of significant leaks was found.)
10. Area 14 was an area where a lagoon was installed to catch seepage from a No. 2 fuel oil spill which occurred in 1973. No significant organics were detected in the monitoring wells. As the source was removed, no further remedial action was recommended by NUS or DER.
11. Records indicate that no on-site disposal has occurred since 1975.

12. At present, the DER has requested continued monitoring of four wells and upstream/downstream on a quarterly basis for a minimum of two years. All other wells installed on site during the study will remain operable for at least two years. A reference to the assessment study is to be put on the deed.
13. The assessment indicated that the elevated levels of organics found were isolated and in perched groundwater zones. No chemicals appear to be migrating off site, and there was no evidence of any impact on groundwater off site or on Deer Creek.
14. Most of the area is serviced by municipal authorities (see attached map). The municipal water wells are located southeast of the facility in unconsolidated deposits near the Allegheny River. Groundwater flow from the site is primarily northward.

KW:bc

cc: K. Watson

ORIGINAL  
(Red)

New Site



**POTENTIAL HAZARDOUS WASTE SITE  
PRELIMINARY ASSESSMENT  
PART 1 - SITE INFORMATION AND ASSESSMENT**

**I. IDENTIFICATION**

01 STATE 02 SITE NUMBER

PA 1982

**II. SITE NAME AND LOCATION**

01 SITE NAME (Legal, common, or descriptive name of site)

Gulf Oil Co. R &amp; D Center

02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER

Gulf Lab Road

03 CITY

(Harmarville) Cheswick

04 STATE

05 ZIP CODE

06 COUNTY

07 COUNTY CODE

08 CONG DIST

PA 15024 Allegheny

09 COORDINATES LATITUDE

LONGITUDE

40 32 40.0

079 49 46.0

10 DIRECTIONS TO SITE (Starting from nearest public road)

From Pittsburgh, Rt 28 north to turnpike / Rt 910 exit. Exit off. Entrance to Gulf Lab road is immediately across from the Exit ramp. Cross over Rt. 910 and up Gulf Lab Rd to the research center.

**III. RESPONSIBLE PARTIES**

01 OWNER (if known)

Chevron / Gulf Oil Co.

02 STREET (Business, mailing, residential)

PO Drawer 2038

03 CITY

Pittsburgh

04 STATE

05 ZIP CODE

06 TELEPHONE NUMBER

PA 15230 412 665-2700

07 OPERATOR (if known and different from owner)

08 STREET (Business, mailing, residential)

09 CITY

10 STATE

11 ZIP CODE

12 TELEPHONE NUMBER

13 TYPE OF OWNERSHIP (Check one)

- ☒ A. PRIVATE ☐ B. FEDERAL: \_\_\_\_\_ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL  
☐ F. OTHER: \_\_\_\_\_ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

- ☐ A. RCRA 3001 DATE RECEIVED: \_\_\_\_/\_\_\_\_/\_\_\_\_ MONTH DAY YEAR ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: \_\_\_\_/\_\_\_\_/\_\_\_\_ MONTH DAY YEAR ☒ C. NONE

**IV. CHARACTERIZATION OF POTENTIAL HAZARD**

01 ON SITE INSPECTION

☒ YES DATE 10 22 85  
☐ NO MONTH DAY YEAR

BY (Check all that apply)

- ☐ A. EPA ☐ B. EPA CONTRACTOR ☒ C. STATE ☐ D. OTHER CONTRACTOR  
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: \_\_\_\_\_ (Specify)

CONTRACTOR NAME(S): \_\_\_\_\_

02 SITE STATUS (Check one)

☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION

1948 1975  
 BEGINNING YEAR ENDING YEAR

☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

alleged laboratory chemicals, incinerator ash, gas cylinders, oily sludges, acids, caustics, chlorinated solvents, diesel fuel (from spill)

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

little to no potential hazard - most wastes removed from site - see attached memo

**V. PRIORITY ASSESSMENT**

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)

- ☐ A. HIGH (inspection required promptly) ☐ B. MEDIUM (inspection required) ☒ C. LOW (inspect on time available basis) ☐ D. NONE (no further action needed, complete current disposition form)

**VI. INFORMATION AVAILABLE FROM**

01 CONTACT

Mark Gorman

02 OF Agency Organization

PA Dept of Environmental Resources

03 TELEPHONE NUMBER

1814-1724-3526

04 PERSON RESPONSIBLE FOR ASSESSMENT

Kathy Watson

05 AGENCY

PA DER

06 ORGANIZATION

BSWM

07 TELEPHONE NUMBER

1412 665-2900

08 DATE

3 14 86  
 MONTH DAY YEAR



## POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT PART 2 - WASTE INFORMATION

## 1. IDENTIFICATION

01 STATE	02 SITE NUMBER
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## II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

<b>01 PHYSICAL STATES</b> (Check all that apply) <input checked="" type="checkbox"/> A. SOLID <input type="checkbox"/> B. POWDER, FINES <input checked="" type="checkbox"/> C. SLUDGE <input type="checkbox"/> D. OTHER _____ (Specify)	<b>02 WASTE QUANTITY AT SITE</b> (Measures of waste quantities must be independent) TONS <u>unknown</u> CUBIC YARDS _____ NO. OF DRUMS _____	<b>03 WASTE CHARACTERISTICS</b> (Check all that apply) <input checked="" type="checkbox"/> A. TOXIC <input type="checkbox"/> B. CORROSIVE <input type="checkbox"/> C. RADIOACTIVE <input type="checkbox"/> D. PERSISTENT <input checked="" type="checkbox"/> E. SOLUBLE <input type="checkbox"/> F. INFECTIOUS <input type="checkbox"/> G. FLAMMABLE <input type="checkbox"/> H. IGNITABLE <input type="checkbox"/> I. HIGHLY VOLATILE <input type="checkbox"/> J. EXPLOSIVE <input type="checkbox"/> K. REACTIVE <input type="checkbox"/> L. INCOMPATIBLE <input type="checkbox"/> M. NOT APPLICABLE
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### III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	unknown	amount	
OLW	OILY WASTE	1000 gal	from spill	recovered
SOL	SOLVENTS	unknown	amount	
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS	unknown	amount	
ACO	ACIDS	unknown	amount	
BAS	BASES	unknown	amount	
MES	HEAVY METALS			

## IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

[illegible]

**V. FEEDSTOCKS** See Appendix for CAS Numbers

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

## VI. SOURCES OF INFORMATION (Cite specific references, e.g., State 'our source and his reports')

1. Soil and Groundwater Assessment Report Vols 1 & 2 (copy in state file)  
includes interviews with employees and sampling analyses.

ORIGINAL  
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new site

POTENTIAL HAZARDOUS WASTE SITE  
PRELIMINARY ASSESSMENT  
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

## I. IDENTIFICATION

01 STATE 02 SITE NUMBER

## II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION

03 POPULATION POTENTIALLY AFFECTED: 0

02 ☒ OBSERVED DATE 12/85

04 NARRATIVE DESCRIPTION

☐ POTENTIAL ☐ ALLEGEDSee attached memo01 ☐ B. SURFACE WATER CONTAMINATION  
03 POPULATION POTENTIALLY AFFECTED: 002 ☐ OBSERVED DATE  
04 NARRATIVE DESCRIPTION☐ POTENTIAL ☐ ALLEGED

None observed

01 ☐ C. CONTAMINATION OF AIR  
03 POPULATION POTENTIALLY AFFECTED02 ☐ OBSERVED DATE  
04 NARRATIVE DESCRIPTION☐ POTENTIAL ☐ ALLEGED

None observed

01 ☐ D. FIRE EXPLOSIVE CONDITIONS  
03 POPULATION POTENTIALLY AFFECTED02 ☐ OBSERVED DATE  
04 NARRATIVE DESCRIPTION☐ POTENTIAL ☐ ALLEGED

None observed

01 ☐ E. DIRECT CONTACT  
03 POPULATION POTENTIALLY AFFECTED02 ☐ OBSERVED DATE  
04 NARRATIVE DESCRIPTION☐ POTENTIAL ☐ ALLEGED

None

01 ☐ F. CONTAMINATION OF SOIL  
03 AREA POTENTIALLY AFFECTED unknown02 ☒ OBSERVED DATE 12/85  
04 NARRATIVE DESCRIPTION☐ POTENTIAL ☐ ALLEGED01 ☐ G. DRINKING WATER CONTAMINATION  
03 POPULATION POTENTIALLY AFFECTED: 002 ☐ OBSERVED DATE  
04 NARRATIVE DESCRIPTION☐ POTENTIAL ☐ ALLEGED

None

01 ☐ H. WORKER EXPOSURE/INJURY  
03 WORKERS POTENTIALLY AFFECTED: 002 ☐ OBSERVED DATE  
04 NARRATIVE DESCRIPTION☐ POTENTIAL ☐ ALLEGED

None

01 ☐ I. POPULATION EXPOSURE/INJURY  
03 POPULATION POTENTIALLY AFFECTED: 002 ☐ OBSERVED DATE  
04 NARRATIVE DESCRIPTION☐ POTENTIAL ☐ ALLEGED

None

new site

POTENTIAL HAZARDOUS WASTE SITE  
PRELIMINARY ASSESSMENT  
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTSI. IDENTIFICATION  
01 STATE 02 SITE NUMBER

## II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA  
04 NARRATIVE DESCRIPTION02 ☐ OBSERVED (DATE: \_\_\_\_\_)☐ POTENTIAL☐ ALLEGED

None observed

01 ☐ K. DAMAGE TO FAUNA  
04 NARRATIVE DESCRIPTION (Include name(s) of species)02 ☐ OBSERVED (DATE: \_\_\_\_\_)☐ POTENTIAL☐ ALLEGED

None observed

01 ☐ L. CONTAMINATION OF FOOD CHAIN  
04 NARRATIVE DESCRIPTION02 ☐ OBSERVED (DATE: \_\_\_\_\_)☐ POTENTIAL☐ ALLEGED

None observed

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES  
(Spills, runoff, standing liquids, leaking drums)02 ☐ OBSERVED (DATE: \_\_\_\_\_)☐ POTENTIAL☐ ALLEGED03 POPULATION POTENTIALLY AFFECTED: 0

04 NARRATIVE DESCRIPTION

None

01 ☐ N. DAMAGE TO OFFSITE PROPERTY  
04 NARRATIVE DESCRIPTION02 ☐ OBSERVED (DATE: \_\_\_\_\_)☐ POTENTIAL☐ ALLEGED

None

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs  
04 NARRATIVE DESCRIPTION02 ☐ OBSERVED (DATE: \_\_\_\_\_)☐ POTENTIAL☐ ALLEGED

None

01 ☐ P. ILLEGAL UNAUTHORIZED DUMPING  
04 NARRATIVE DESCRIPTION02 ☐ OBSERVED (DATE: \_\_\_\_\_)☐ POTENTIAL☒ ALLEGED

see attached memo

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: 0

## IV. COMMENTS

see attached memo

## V. SOURCES OF INFORMATION (Give specific references e.g. name of state agency, report)

sample analyses  
inspection reports  
groundwater assessment study } on record in Rgh DER office



## FIELD TRIP SUMMARY REPORT

ORIGINAL  
(Red)

This summary should be prepared in conjunction with the Preliminary Assessment, EPA Form 2070-12.

EPA Case Number \_\_\_\_\_

Site Name Gulf Oil Co. R+D Center

### Site Description

Hazardous waste generator and RRR; EPA ID# PADO72159460. Facility is a research center being donated to the University of Pittsburgh for research from Chevron. Chevron had an environmental assessment done by NUS Corporation (consultant) to determine extent of any contamination on-site prior to Univ of Pgh accepting the site.

Area of site (acres)

95 acres

Hazardous portion, if not entire site

approximate 2 acres

### Description of processes/operations which took place at the site

Research center for petroleum products. Processes of concern: 1) acid sludge neutralization in a pit, 2) #2 fuel oil storage (one leaking tank and one former spill of concern), 3) former racecar engine testing area.

### Waste handling/disposal practices

In past, had an acid neutralization pit. Also had a miscellaneous dump (primarily demo waste).

### Site topography and runoff drainage pathways

Site located on a hilltop. Site drains into a tributary to Deer Creek.

Surface or subsurface drainage areas (leachate) noted?

Two seeps were located and sampled during the site assessment conducted by NUS

Odors/stains noted?

None

Stressed vegetation noted?

None

Location and description of streams or receiving waters adjacent to site. Include flow direction and observations. Note location on attached map.

Tributary to Deer Creek adjacent to site. Deer Creek leads to the Allegheny River.

Monitoring wells on site or in vicinity. Note location on attached map.

Many monitoring wells installed during groundwater study, as well as test pits and test borings. See attached site drawing.

Population within 1/4 mile of site:

- ☐ 0-10  
☒ 10-100  
☐ greater than 100

Population within 1 mile of site:

- ☐ 0-10  
☐ 10-100  
☐ 100-1000  
☒ greater than 1000

Surrounding land use (woodlot, agricultural, recreation, industrial, etc.)

NORTH woodlot

EAST residential

SOUTH

woodlot, residential, commercial

WEST

woodlot

Municipal water supply within 3-mile radius (note use of surface water and/or wells)

surface intake approximately (b) (9) Cabinet  
municipal water Authority. Harmer Municipal Water Auth has (b) (9)  
(b) (9)

Reference: Soil &amp; Groundwater Assessment Report

Domestic wells. Approximate number within 1/4 mile: 0  
List nearest wells below and show locations on attached map.

Owner/Resident

Address

Phone

eight wells identified in report, all (b) (9) of site, and  
determined to be in a different water-bearing zone from those  
potentially affect by site.

Groundwater flow direction, if known

Northeast flow at site

Description of odor/taste problems

none

State inspection activity (including permits held)

Facility was inspected as a generator and a RRR under RCRA

State/Federal/Private remedial activities

All determinable wastes have been removed; select wells on-site  
will be monitored quarterly for a minimum of two years.

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Additional comments--Further description of site

see attached memo

#### SITE CONTACTS

Name and Title	Affiliation	Phone
John Zak / Director of physical plant	Chevron	(412) 665-6066
Not responsive due to revised scope / project manager	NUS Corporation	Not responsive due to revised scope
Bill Malesky / Director of env. affairs, env. engineer	Gulf Oil Co	(412) 665-2700
E. James Owens / VP	Chevron	

#### INSPECTION INFORMATION

Name and title of inspector(s) Kathy Watson

Agency PADER Phone number 412-665-2956

Date 10/22/85, 11/25/85 Time on site am

Weather conditions: On both dates, clear and cold

#### ATTACHMENTS

- o Topographic map identifying site location. Include name of quadrangle map.
- o Site sketch map showing location of monitoring wells, domestic wells, municipal water supplies, and areas of concern (lagoons, leachate seeps, drums, etc.)
- o Any available sampling results or state monitoring data with map showing sample locations.

March 19, 1986

SUBJECT: Site Assessment  
Gulf Research & Development  
Company/Chevron Corporation  
Harmarville, Pa.

TO: Charles Duritsa  
Regional Solid Waste Manager  
Bureau of Waste Management  
Southwestern Region

FROM: David Hess D.H.  
Hydrogeologist  
Bureau of Waste Management  
Southwestern Region

A site assessment was performed on the above facility by Chevron Corporation in anticipation of the property transfer to the University of Pittsburgh. The objective of the study was to determine the environmental affects of past waste handling and related activities at this facility. The Department was kept informed of the proposed work and the information collected during development of the Phase I and Phase II investigations. The Department has also met with the University of Pittsburgh to understand their specific concerns of these findings.

The Phase I study concentrated on 15 areas of potential concern based on past disposal and handling practices. Work included: 41 test pits, 35 test borings, 18 monitoring wells and 2 geophysical surveys. Based on these results, 6 areas were considered for additional investigation.

1. The Rosebowl area (Area No. 1)  
Some organics found here.
2. Area by Building #25 (Area No. 11)  
Underground tank storage area.
3. Area around old seepage basin (Area No. 14)  
Collection area from 1973 fuel oil spill.
4. Area around Monitoring Well MW-2C (Area No. 17)  
Presence of some sludge-like non-insitu materials.
5. Area around MW-3B  
Well contained approximately 1/4" floating hydrocarbons (diesel fuel).
6. Areas between Areas 1 through 5 listed above for further hydrogeological study.

The Phase II work included 57 additional test pits (9 were converted to monitoring points), 15 test borings, 15 monitoring wells and one piezo-meter. Pump tests were also performed to define the relationship between the various water zones.

- Areas No. 11 and 14 did not appear to have significant contamination. Area No. 17 was found to be fill material used during the construction of Route 28. The hydrocarbons found in MW-3B were not found in the surrounding area. The Department and University of Pittsburgh did have some concerns of the concentrations found in Area 1.

The assessment was quite comprehensive and therefore I do not feel further hydrogeologic study is needed at this time. It is recommended that the following monitoring program be implemented for a minimum of two years, beginning with the second quarter of 1986.

Establish upgradient and downgradient monitoring points for the unnamed tributary to Deer Creek, running through the northern portion of the site. These should be identified on a U.S.G.S. topographic map together with a short written description so that Department personnel can locate the points in the field. Samples will be taken quarterly for a minimum of the following parameters:

pH	Ammonia Nitrogen
Total Organic Carbon	Calcium
Total Organic Halogens	Magnesium
Specific Conductance	Iron
Alkalinity	Sodium
Chloride	Manganese
Sulfate	Potassium
Nitrate-Nitrogen	Aluminum

Monitoring assessment wells, MW-3B, MW-5B, MW-5C and a well to be drilled in the vicinity of existing well TPRB-1. Samples will be taken annually, starting in 1987 for the following parameters:

pH	Chloride
Specific Conductance	Calcium
Alkalinity	Magnesium
Sodium	Manganese
Potassium	Aluminum
Sulfate	Iron

Samples of the wells will be taken quarterly for the following parameters:

1,1-Dichloroethene	Chloroform
Trans 1,2-Dichloroethene	Benzene
Trichloroethene	Ethylbenzene
Tetrachloroethene	Trimethylbenzene
Chlorobenzene	Total xylenes
Dichlorobenzenes	Vinyl Chloride
Methylene Chloride	

- 3 -

The drill log of the new well and its completion details and the description of the surface monitoring locations should be forwarded to the Department within 90 days. The sample analysis results are to be sent to Charles Duritsa, Regional Waste Manager.

DH/kw

cc: Central  
Regional  
Chron  
K. Watson  
T. Orlando —  
D. Peterson  
D. Hess

Attached are the following:

ORIGINAL  
(Red)

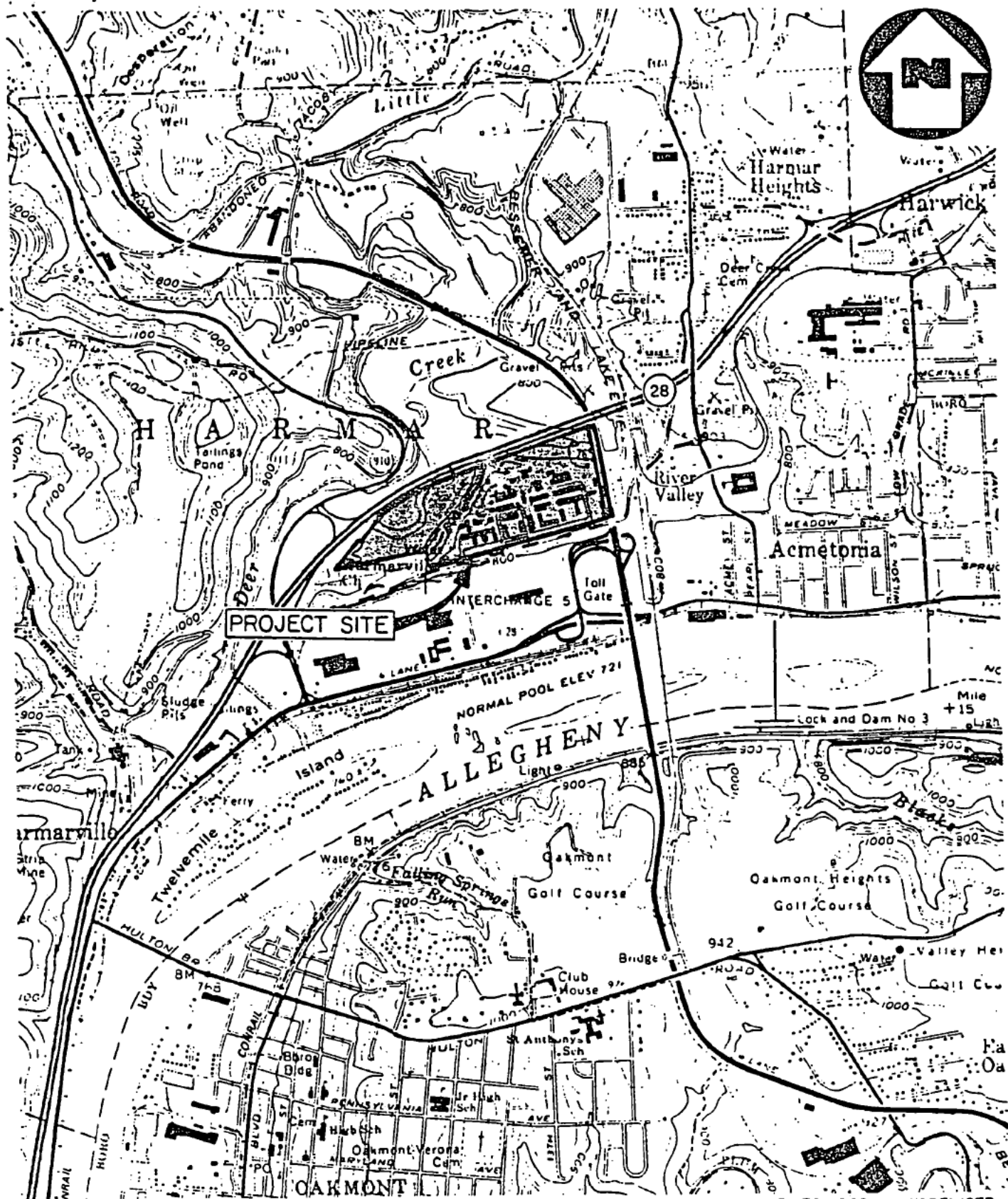
1. Site sketch map

- a. Shows location of monitoring wells, test pits, and test borings
- b. areas of potential concern targeted in Phase II of the soil and groundwater study were numbered one through fourteen and are shown as cross-hatched areas on this map.

2. USGS Topo Maps

- a. Oakmont Boro Water distribution system
- b. Harmar Twp Water distribution system
- c. Existing Artesian well locations
- d. Residential well locations

3. Site Location map



BASE MAP IS A PORTION OF THE U.S.G.S. NEW KENSINGTON WEST, PA QUADRANGLE (7.5 MINUTE SERIES, 1960, PHOTOREVISED 1979). CONTOUR INTERVAL TWENTY FEET.

Gulf R+D Center  
Preliminary Assessment  
K. Watson 3/13/86  
Site Location



(b) (9)

BASE MAP IS A PORTION OF THE U.S.G.S. NEW KENSINGTON WEST, PA QUADRANGLE (7.5 MINUTE SERIES, 1960, PHOTOREVISED 1979).  
CONTOUR INTERVAL TWENTY FEET.

RESIDENT WELL LOCATIONS  
GULF RESEARCH & DEVELOPMENT CO., HARMAR TWP., PA

FIGURE 3-6



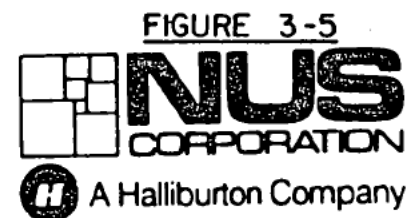
ORIGINAL  
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3-26

(b) (9)

BASE MAP IS A PORTION OF THE U.S.G.S. NEW KENSINGTON WEST, PA QUADRANGLE (7.5 MINUTE SERIES, 1960, PHOTOREVISED 1979).  
CONTOUR INTERVAL TWENTY FEET.

EXISTING ARTESIAN WELLS (MUNICIPAL AND INDUSTRIAL)  
GULF RESEARCH & DEVELOPMENT CO., HARMAR TWP., PA  
SCALE: 1" = 2000'



(b) (9)

BASE MAP IS A PORTION OF THE U.S.G.S. NEW KENSINGTON WEST, PA QUADRANGLE (7.5 MINUTE SERIES, 1960, PHOTO REVISÉD 1979).  
CONTOUR INTERVAL TWENTY FEET.

FIGURE 3-3

HARMAR TWP. MUNICIPAL AUTHORITY WATER DISTRIBUTION SYSTEM  
GULF RESEARCH & DEVELOPMENT CO., HARMAR TWP., PA

SCALE: 1" = 2000'



(b) (9)

BASE MAP IS A PORTION OF THE U.S.G.S. NEW KENSINGTON WEST, PA QUADRANGLE (7.5 MINUTE SERIES, 1960, PHOTOREVISED 1979).  
CONTOUR INTERVAL TWENTY FEET.

OAKMONT BORO MUNICIPAL AUTHORITY WATER DISTRIBUTION SYSTEM  
GULF RESEARCH & DEVELOPMENT CO., HARMAR TWP., PA

SCALE: 1" = 2000'

FIGURE 3-4



